

Spark Gap

Vol. 32, Issue 1, January 2015 *MARC - Serving Central Indiana Communities for thirty-two years*

On Our MARC...

We made it thru 2014 – Welcome 2015!!

Hope everyone had a good Holiday Season. Now that we are in the New Year we have lots of things that need to get done. Please mark your calendars for March 14th for the one day tech class. We would like to see MARC club members there to show their support. The Sheriff Department will be holding a training class in the EOC training room on March 14th so we needed to find a new location for the class. It will be held at White River Fire Department Station 53 located at 850 S. Mullinx Road in Greenwood, just off Smith Valley Road and SR37.

The PIO team has some great ideas to help with getting our name out into the public domain. Anyone interested in helping spread the word about the tech class, what we do and Amateur Radio in general, please contact Kevin, Rusty or Marlys. I'm sure that once the flyers get printed, your help in getting them posted on bulletin boards at Libraries and other public places that will allow us to post these notices will be appreciated.

We have been approved for the Yaesu DR-1X repeater. Unfortunately the radio is on back order until the end of February. We will keep everyone informed as we progress with the installation of this exciting new technology.

With the New Year, Club dues are due. Please see Cy Young, N9CHY, about getting dues current for 2015.

Hope to see you Saturday. The coffee will be on.

Jacki, KI6QOG
President



JANUARY BIRTHDAY WISHES TO:

KD9ALA – Ken Barr

KD9BHM – Marlys Barr

KC9WLF – Jim Busch

KB9BVN – Brian Murry

2014 Sunday Net Recap

Average Number of Check-Ins: 32.7
Total Check-Ins for Year: 1,699
Most Check-Ins: 48 (Feb 16)
Least Check-Ins: 8 (Feb 8, Simplex Net)
Next Least Check-Ins: 23 (May 25)

We have had a steady increase in net participation each year from an average of 13 per week in 2006 when I started keeping records, to 31.7 in 2013 and 32.7 in 2014. Thanks to everyone who checked into the net last year. Also a big "Thank You" to our group of Net Control volunteers, KC9EBL, K9ICP, N9SIU, and K9THR who help keep the net going.

If you are not a regular on the net, you are always invited to check in. It not only gives you a chance to check your rig, but it gives us an idea of our repeater coverage area. We report our monthly results to the ARRL Indiana Section Net Manager. A robust showing makes a good impression and shows we have an active group who is prepared should an emergency arise. It is not only good for the club, but it shows that Johnson County and surrounding areas have an active group of amateurs.

--Steve K9DY

JANUARY 2015

**Once again it is time to renew your membership to the
Mid-State Amateur Radio Club.**

Dues are still just \$ 18.00 per year!

**Please see Cy Young N9CHY before or after the meeting.
You may also mail in your dues to:**

**M.A.R.C.
P. O. Box 836
Franklin, Indiana 46131
Att: Cy Young N9CHY**

Technician Class Ham Radio License

Review and Testing

NO MORE MORSE CODE!!

On February 23, 2007, the Federal Communications Commission (FCC) eliminated Morse code testing for the Amateur Radio Service!

The Mid-State Amateur Radio Club is offering a 1-day review on the Technician Class amateur radio test on Saturday March 14th, 2015. The program is scheduled to begin at 8am in the Community Room at White River Twp Fire Department Station 53 located at the intersection of Smith Valley Road and State Road 37. The address is 850 S. Mullinix, Greenwood, IN 46143. Persons that pass their test will be entered in a drawing to get a Baofeng UV5R dual band 2m/440 portable radio.

Important Registration Information:

- ✓ Class size is limited. To enroll, [click here to email the Club Secretary.](#)
- ✓ This is a review and test preparation session only. It is **not** a class to teach the material. It will be an intense 8 hour review with license testing at the end of the day!
- ✓ Class is free but students need to purchase the ARRL 3rd Edition [Ham Radio License Manual](#) and **study before** the review session.
- ✓ Students may also get the KB6NU's [No-Nonsense Study Guide](#) to **study prior to the program** for free!

Study Resources

The following exam practice aids and resources have been developed by hams for prospective licensees. These are for the technician class license and other hams who want to upgrade to a license with more privileges. Everyone learns differently, find out which of these resources will be most useful to you!

[101 Science](#) .com has a very good straight forward on line course that covers the basic electronics needed for the technician license and more. This course is for studying the electronics theory portion only.

AA9PW.com offers testing options for visually challenged users with its option for "no figures" in the exam.

QRZ.com Check the "resources" link for test and study resources. Bookmark this one as a good information source once you get your license!

HamStudy.org offers flash cards and practice exams developed by Richard Bateman, KD7BBC and sponsored by ICOM America.

AH0A offers [Ham Academy](http://HamAcademy) for exam practice. It is designed to be downloaded and run off-line in any browser. It has been tested on the iPhone and Android phones.

[Gordon West – On line technician class videos](#). 21 videos in all!

[Ham Radio Operating and Ethics](#) is an excellent resource of information for the newly licensed amateur radio operator.

Hints & tips for passing your Amateur Radio Technician Class License on the 1st try

- 1) It's not a college exam, so don't stress! Study a few minutes each day; try not to make a last minute 'cram' for the test.
- 2) In the Technician class question pool there are 426 questions possible. The actual test only has 35 questions, you are required to get over 75% (26 out of 35 – you can miss 9!) for a passing grade.
- 3) Find what subject you're best at (antennas, feed lines, rules, safety, theory, etc.) and study where you can pass those questions no problem. Find the one weak subject, study it but don't kill yourself doing it. You can miss 9 questions and typically each element has 2 to 4 questions on the test. The idea is you can miss the 2 or so questions in the subject you are weaker on and pass the others.
- 4) **When taking the online tests, take them often and when you can pass the tests 8 out of 10 times, you are probably ready for 'the test'!**

What's Next? How Soon Can I get on the air!!??

CONGRATULATIONS!! You have you have just passed the tests for a brand new Amateur Radio License. To show that you have taken and passed your exam you will be given a Certificate of Successful Completion of Examination (CSCE) showing the exam date, the class of license and operating privileges you qualified for.

Caution: The CSCE is NOT a license to operate a radio station. If you are a new operator and have not previously held a license, or are a person who has applied for a new license via the relicensing program, you must wait until your new call sign, name, and address appear in the FCC's ULS database before beginning on the air operations.

Most likely, we will mail your information from the testing session today! It will be entered into the FCC database in just a few days. When your license is issued, it will appear in the [FCC database](#) typically on a Thursday. As soon as your name and new call sign appears in the database, you may begin to use your new license and call sign. If the license has not been issued, don't worry, it's a government thing and it's a process. It may take a few days, especially if a weekend or holiday is involved. Be patient, and check back every day. Soon you will be rewarded with your new call sign.

You do not have to wait for a physical license document to arrive at your home. The 'hard copy' will usually arrive in the mail within 10 days. If you do not see your name in the FCC database within 3 weeks, contact us by email at secretary@midstatehams.org for support.

To find out if your new license is ready?

Check the FCC database to see if your license has been issued [here](#).

Do a search, using the "License Search" box at the top of the page. Change the license search to "By Name" from the drop down list. Enter your name like this: "Smith, John E" and press the "Search" button. Any names matching the search criteria will appear. If more than one name appears, find one that is closest to your name **including the initial**, and shows as "active" under the "status" column. If there is more than one listing, click on the 'call sign' and look at each of them until you find the one with your address and that's likely your new call sign.

As soon as your new license showing your name, address, and call sign appear in the FCC's database, as evidenced by the search you just completed from the preceding paragraphs, you may begin operating. Just grab your microphone, keyboard, or telegraph key and go for it! Check out the [Ham Radio Operating and Ethics](#), an excellent resource of information for the newly licensed amateur radio operator about how to make your first contact.

Upgrading your license??

Temporary operating authority:

If you have just upgraded your license by passing additional elements, and if the elements you have completed will result in your having additional operating privileges, you may begin using them immediately! **You do not have to wait until we have sent the upgrade data to the FCC.**

You will notice on your CSCE (Certificate of Successful Completion of Examination) form that one of the options under "Operating Privilege" has been circled. Also, on the back of the CSCE form, is a brief explanation of how to identify your station. You should use this special identification procedure until your license has been modified, and the FCC database shows your new privileges. Once the changes have been included in the FCC's database, you no longer need to use the special identification. Just use your call sign as you have been doing so far - before the upgrade.

The exception to this rule is you have asked for and received a new call sign. In that case, use your old call sign with the temporary identifier until your new call sign is listed in the FCC database, then switch to using your new call sign, and discontinue using of your old call sign.

YEASU SYSTEM FUSION

At the January MARC meeting it was reported that the new YEASU System Fusion Repeater DR-1X has been ordered by the club Trustee Chris Frederick, KQ9Y with the approval of members present in December. YEASU had a special promotional "deal" to get their new system in as many locations as possible.

What makes this system unique is that it is useable with the YEASU Digital and conventional analog. It has the ability to accept the digital and/or analog signal automatically. So no matter which radio you are using it will switch with you doing nothing except talk as with any other repeater system.

If you would like to see a video on how this system works in an actual location please go to YouTube and type in "YEASU System Fusion" and you will be directed to the video.

According to Chris it maybe another couple of months before the new repeater system is actually on-line and in use.

The next page is a copy of the YEASU flyer explaining how the system works as well as the new line of digital radios that can be used with this system.

Introducing the *System Fusion* for the Future Amateur Radio Communication

September 19, 2013

We are pleased to announce our exciting new Digital operating system, *System Fusion*, with attractive full-featured Dual Band C4FM / FDMA Digital products including our FT1D Handheld Transceiver, FTM-400D Mobile Transceiver and our Digital Repeater, DR-1. We are certain that the many useful and easy-to-use *System Fusion* features will be expanding your enjoyment of VHF & UHF Amateur Radio Communications.

Fact - Amateur Radio operators are always looking for diverse ways to enjoy radio communications. *System Fusion* is the perfect platform to feed their desire because it brings the right digital solutions to the Amateur VHF & UHF bands. Compared to other Digital modulation methods within FDMA, C4FM is recognized as producing superior audio quality. Equally as important, C4FM provides better reception while you are on the move or receiving challenging weak signals thanks to its better BER (Bit Error Rate) characteristics. C4FM is the principle mode used by professional communication devices in FDMA and is expected to continue to be the leading mode for digital radio communications long into the future.

However, we want you to know that we also strongly believe that conventional analog FM has a number of excellent features that continue to provide substantial advantages over digital modulations, such as low battery consumption and greater distance capability. Therefore, analog FM communications will continue to be the primary method for communication on the VHF & UHF Amateur Radio bands. *System Fusion* recognizes the continued need for existing conventional analog FM by including a *FM Friendly* interface; our uniquely flexible DR-1 Repeater that accepts signals from analog FM and FDMA / C4FM digital communication users.

Since introducing our FT1D Handheld Transceiver in June of this year, many Amateur Radio operators have already recognized and enjoyed clear and crisp voice communications provided through C4FM digital communications. It is not just the wonderful audio, though, that makes *System Fusion* the best Amateur Radio digital communications system. *System Fusion* is a full 12.5 kHz bandwidth system that includes the ability to transfer reliable high-speed data communications such as text messages, images, and voice memo data – the uses for these impressive features are limited *only by your imagination!*

System Fusion opens the door to an entirely new era of Digital Communications bringing Amateur Radio communication possibilities that were never possible with other digital solutions in the past.

System Fusion Key Features

Snapshot Function

Simply connect a MH-85A11U (option) microphone with camera to easily take snapshots. The image data can then be displayed on your screen as well as easily be sent to other C4FM / FDMA digital transceivers. This image data also retains a time record and the GPS location data of the snapshot.

AMS (Automatic Mode Select)

System Fusion radios operate in three digital modes and one analogue mode; V/D mode (Voice/Data simultaneous communication mode), Voice FR mode (Voice Full Rate Mode), Data FR mode (High Speed Data Communication Mode), and Analog FM mode. The radios identify these four modes and select from them automatically when receiving a signal.

Digital Group Monitor (GM) Function

The digital GM function automatically checks whether members registered to a group are within communication range, and displays information such as the distance and orientation for each call sign on the screen. This function can be used to send message and image data between group members.



Amateur Division

PRODUCT BULLETIN

No: 13-0919

Smart Navigation Function

In digital V/D mode, information such as position data is transmitted together with voice signals so the distance and direction to the other stations can be displayed in real-time while communicating with them. (Real-time navigation function) And when hiking or camping, at the touch of button, you can register your starting point or campsite before departure. The distance and orientation from your current location are then displayed on the screen. (Backtrack function)

System Fusion Product Line-up and Delivery Schedule

FT1D: Full-featured C4FM / FM Compatible Dual Band Portable

Delivery Schedule: Already available through USA and Canadian Dealers

FTM-400D: Full-featured C4FM / FM Compatible Dual Band Mobile

Delivery Schedule: Already available through USA and Canadian Dealers

DR-1: Full-featured C4FM / FM Compatible Dual Band Repeater/Base station

Delivery Schedule: November 2013

HRI-200: Internet Interface device.

Delivery Schedule: November 2013



FT1D



FTM-400D



DR-1



HRI-200

We believe that *System Fusion* makes important contributions that move Amateur Radio smoothly forward employing VHF and UHF digital communications opportunities while not carelessly discarding tens of thousands of Amateur Radio operators who currently use analog FM communications products purchased with their hard-earned money. We excitedly anticipate widespread *System Fusion* system acceptance.

Very truly yours,

Dennis Motschenbacher K7BV

Executive Vice President Amateur Radio Sales
YAESU USA

MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the THIRD SATURDAY of each month in the basement of the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, Indiana 46131.

See our website, www.midstatehams.org, for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a HAM to attend our meetings or a member of the club.

WA9RDF
Repeater
146.835/
146.235 MHz
151.4 Hz PL Tone

Club Officers:
President: Jacki Frederick – KI6QOG
Vice President: Dave Daily – KB9LOT
Secretary: Rhonda Curtis– WS9H
Treasurer: Cy Young – N9CHY
Repeater Trustee - Chris Frederick – KQ9Y

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS

The Official Newsletter of the Mid-State Amateur Radio Club

*P.O. Box 836
 Franklin, Indiana
 46131*

Editor: Robert LaGrange N9SIU

Please send your articles to my email n9siu@yahoo.com no later than the 3rd of the month

Answer to Aerial View: